

Amendment to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application.

Listing of the Claims:

1. (currently amended) A surgical robotic system comprising:
a master controller having an input device ~~movable in a controller~~
~~workspace; and a master controller linkage supporting the input device so that the input~~
device can move in a controller workspace with a first number of degrees of freedom;

a slave having a tool with an end effector, a slave linkage movably
supporting the ~~end-effector tool~~, and at least one actuator operatively coupled to the end
~~effector; tool so that the at least one actuator moving moves~~ the end effector in a surgical
workspace with a second number of degrees of freedom in response to slave actuator
signals, the second number being less than the first number;

an imaging system including an image capture device with a field of view
movable in the surgical workspace and ~~a~~ an imaging system linkage movably supporting
the image capture device, the imaging system generating state variable signals indicating
the field of view; and

a processor ~~coupling coupled to~~ the master controller ~~to and~~ the slave,
~~arm;~~ the processor generating the slave actuator signals by mapping the input device in
the controller workspace with the end effector in the surgical workspace according to a
transformation, the processor changing the transformation in response to a tool change
signal when the tool ~~coupled to the holder~~ is replaced by a selected alternative tool.

2. (currently amended) The surgical robotic system of claim 1, wherein
the field of view of the imaging system is movable within the surgical workspace, the
imaging system generating state variable signals indicating the field of view, and wherein
the processor ~~derives~~ is coupled to the imaging system so as to derive the transformation in
response to the state variables signals of the imaging system.

3. (cancelled).

4. (currently amended) The surgical robotic system of claim 3 1, wherein ~~the linkage of the master controller~~ linkage has at least one redundant degree of freedom.

5. (currently amended) The surgical robotic system of claim 3 1, ~~wherein the slave comprises a manipulator arm releasably supporting the tool holder, wherein an alternative tool allows movement of an alternative end effector with at least one more degree of freedom than the end effector when the alternative tool is mounted to the tool holder,~~ wherein the processor inhibits movement of the input device in the controller workspace when the tool is in use so that the input device is movable in the second number of degrees of freedom.

6. (currently amended) The surgical robotic system of claim 1, wherein the processor calculates the transformation in response to a signal indicating at least one member of the a group consisting of a movement of the camera image capture device, a decoupling and repositioning of one of the master and the slave relative to the other, a change in scale of the mapping, manual movement of a passive joint of the slave, and association of the master with an alternative slave.

7. (cancelled).

8. (withdrawn) A surgical robotic system comprising:

a master controller having an input device movable in a master controller space, the input device having a grip sensor for squeezing with a hand of a surgeon, the grip sensor defining a grip pivot;

a slave arm having an end effector supported by a linkage so that the end effector is movable in a surgical workspace, the slave arm having actuators coupled to the

linkage for moving the end effector in response to slave actuator signals, the end effector comprising jaws with a jaw pivot;

an image capture device having a field of view within the surgical workspace and transmitting an image to a display; and

a processor coupling the master controller to the slave arm, the processor generating the slave actuator signals in response to movement of the input device so that the jaw pivot in the display appears substantially connected with the grip pivot.

9. (withdrawn) The robotic system of claim 8, wherein the end effector rotates about the jaw pivot when the input device rotates about the grip pivot so that an orientation of the end effector image shown in the display substantially corresponds to an orientation of the input device in the controller workspace.